

An effective NIR laser/tumor- microenvironment co-responsive cancer theranostic nanoplatform with multi-modal imaging and therapies

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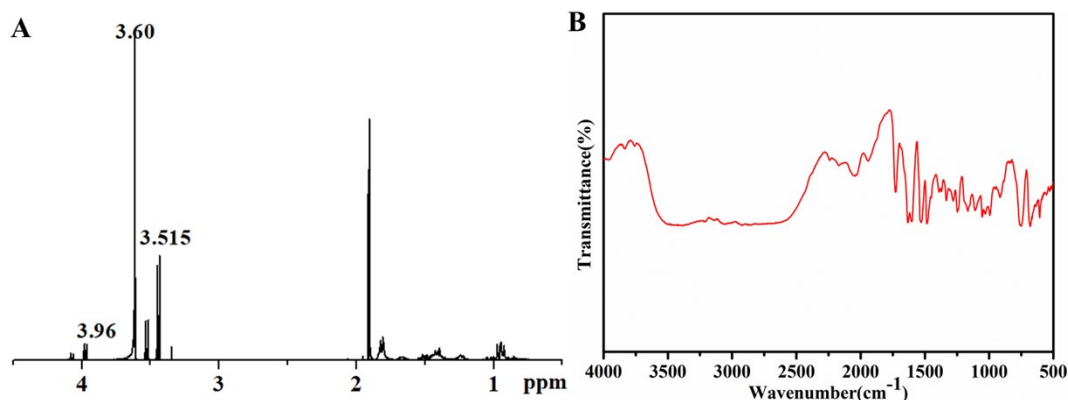


Fig. S1 (A) ¹H NMR and (B) FTIR spectrum of PbP copolymer.

The successful preparation of PbP vesicles was confirmed by ¹H NMR and FTIR spectrum. From Fig. S1A, the peaks of methyl proton adjacent to the ketone bond appeared at ~1 ppm and 3.515 ppm, respectively. The methylene protons peak belonged to mPEG was observed at 3.60 ppm.¹The methylene proton peak connected with the ester bond was located at 3.96 ppm. The above results demonstrated that PbP vesicles was synthesized. In the Fig. S1B, the peaks at 3000-2800 cm⁻¹ and 1470 cm⁻¹ were respectively corresponded to the methyl and methylene stretching vibration and

methylene deformation vibration, the strong peak at 1063 cm^{-1} was assigned to the characteristic peak of C-O-C group of ketal bond,² which further indicate the successful synthesis of PbP vesicles.

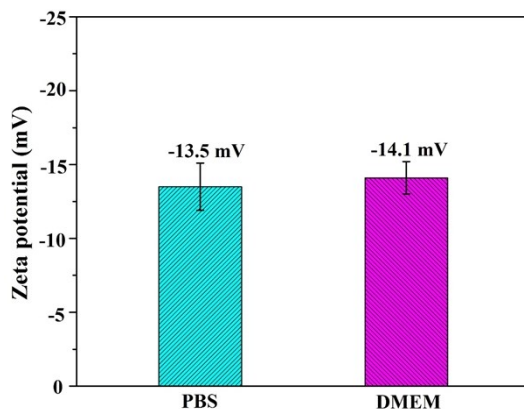


Fig. S2 Zeta potentials of Au1Ag24 NCs in different media.

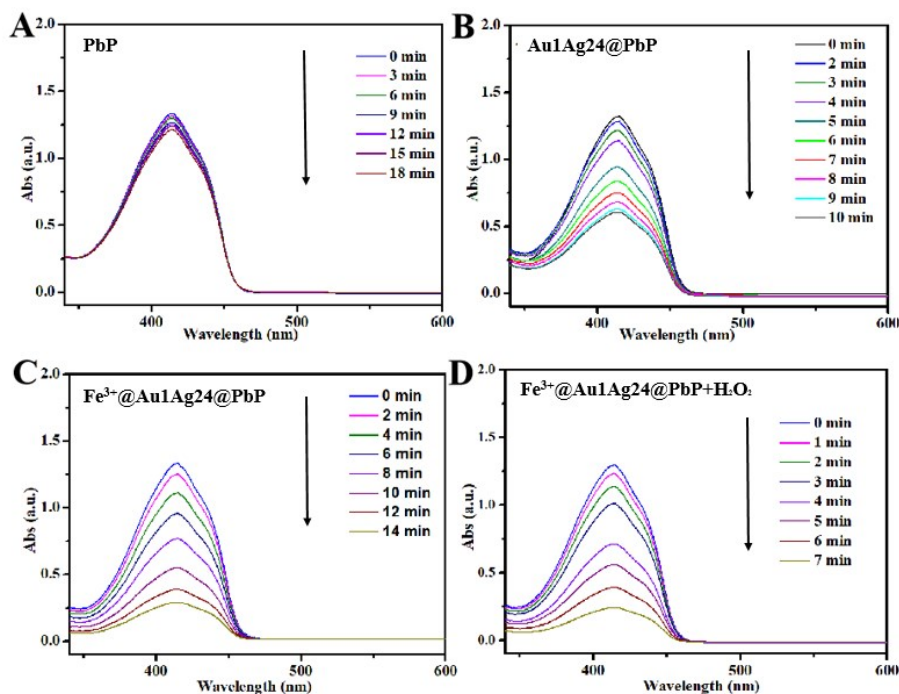


Fig. S3 Absorbance changes at 410 nm of DPBF solutions in the presence of (A) PbP, (B) Au1Ag24@PbP, (C) Fe³⁺@Au1Ag24@PbP and (D) Fe³⁺@Au1Ag24@PbP + H₂O₂ with 808 nm laser irradiation.

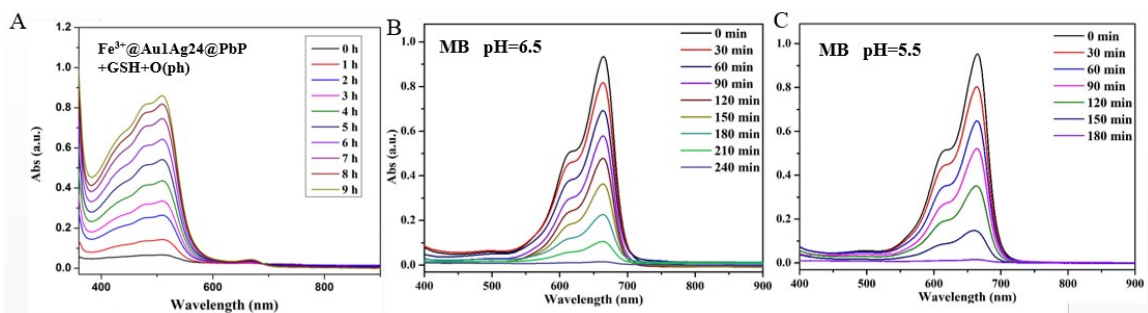


Fig. S4 Absorbance changes of (A) o-phenanthroline at 512 nm and (B, C) MB solutions at 664 nm at (B) pH=6.5 and (C) pH=5.5 over Fe³⁺@Au1Ag24@PbP with different time.

References

- 1 S. Lee, S.C. Yang, M.J. Heffernan, W.R. Taylor, N. Murthy, *Bioconjugate Chem*, 2007, **18**, 4–7.
- 2 Y. Wang, B. Chang, W. Yang, *J. Nanosci. Nanotechno*, 2012, **12**, 8266–8275.